ON SCENE

THE NATIONAL MARITIME SAR REVIEW

DEPARTMENT OF TRANSPORTATION

U.S. COAST GUARD

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IMCO SAR GROUP COMPLETES TASK

An IMCO Working Group of SAR Experts which has been developing an international maritime SAR plan completed its work in June 1977.

The group's objective was to produce a set of working documents for use by an international SAR conference which was originally scheduled for 1978 but which is now scheduled for the spring of 1979. It accomplished this objective and somewhat more.

The group forwarded to the Maritime Safety Committee of IMCO the following:

a. Draft articles for a Maritime SAR Convention;

b. A draft technical annex for the convention;

c. A draft conference resolution on future coordination of maritime SAR questions; and

d. A draft conference resolution endorsing the IMCO SAR Manual (IMCOSAR) and the Merchant Ship Search and Rescue Manual (MERSAR) as constituting a valuable supplement to the convention.

IMCO SAR MANUAL

An additional document which was forwarded to the Maritime Safety Committee for action rather than for referral to the conference is the IMCO SAR Manual. Closely paralleling the ICAO SAR Manual IMCOSAR provides comprehensive guidelines for countries which establish maritime SAR organizations. As such it is complementary to the MERSAR Manual, also published by IMCO, which provides guidance for ships at sea in performing SAR operations. If approved by the Maritime Safety Committee, IMCOSAR will be circulated to all member governments. An accompanying draft resolution would provide IMCO Assembly approval on this action and would establish an approved amendment procedure.

THE INTERNATIONAL MARITIME SAR CONFERENCE

It is expected that the call for the conference will be issued by IMCO shortly after the Maritime Safety Committee acts on the report of the working group next spring. If the conference adopts the convention, it will be the first time in history that an international treaty dedicated exclusively to search and rescue will have been agreed to by the world community.

ON SCENE is a SAR publication published by the Commandant, U. S. Coast Guard as a source of information concerning current and proposed procedures as well as new developments in SAR. Articles contained herein are non-record and non-directive.

The Liferaft

With this issue we introduce a new feature - Selected first-hand survival accounts. The accounts in this issue are taken from the International Radio-Medical Centre (CIRM) study Exposure at Sea prepared by E.C.B. Lee, MRINA and Kenneth Lee, M.B. The accounts are reproduced by special permission from CIRM. They are in the form of excerpts from the reports of men who have actually experienced the events described and are grouped under general headings. In this issue we will look at the initial moments of the survival situation.

Ship Listing.

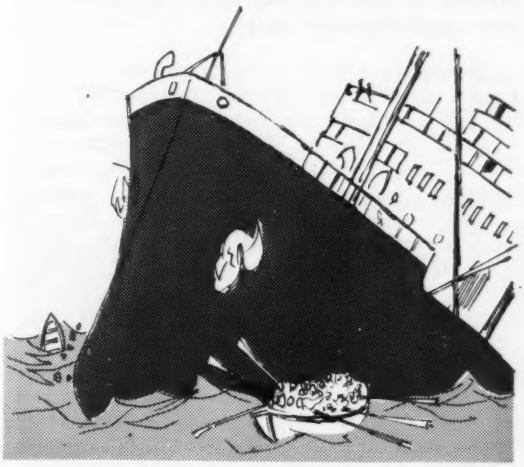
"She took a heavy list to port and the people who went to the port boats were told to use those on the starboard side on account of the heavy list".

Ship Drifting.

"The ship sank in two minutes, stern first; I had just time to run on deck, then walked over the ship's side into the sea. When I came to the surface the ship had completely disappeared. A number of the crew jumped over the starboard (leeward) side and owing to the strong wind, rough sea and set of the current, the ship drifted over them and they were drowned. Those who jumped over the port (windward) side were saved".

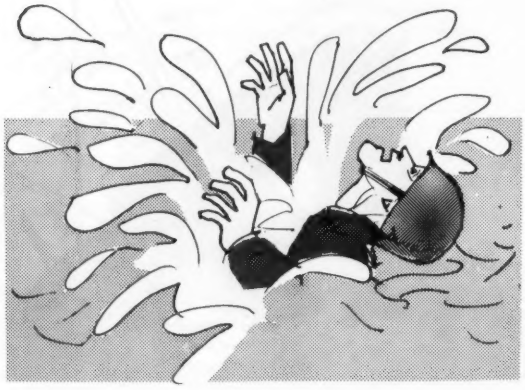
Ship Drifting.

"In spite of the heavy sea the boats on the weather side were lowered more easily than I expected, although the ship was drifting away the whole time... The ship was drifting on the boats on the lee side, and we had great difficulty in pushing ourselves clear of the ship's side We broke five oars in the attempt".



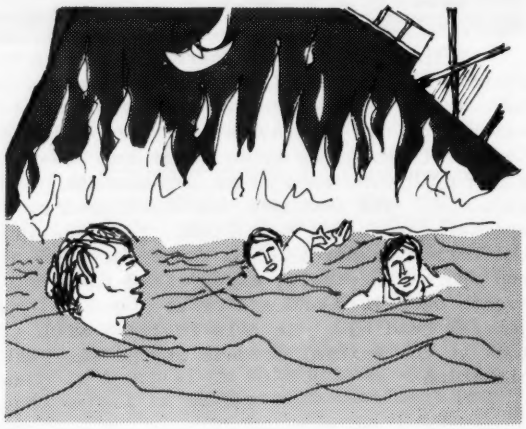
Oil Fire on Water.

"I told them to take off their life-jackets to enable them to swim faster through the flames... I came across two soldiers, so pulling off their lifejackets I just pushed them overboard. Both these men managed to swim clear of the flames and were rescued. The flames spread over the after part of the ship and surrounding waters... There was no alternative other than dive through the blazing water, so I dived from the poop, the impetus carrying me a considerable distance under water. I continued swimming under water until I thought my lungs would burst but on coming to the surface I realized that the effort had been worth while, as I was just on the outside of the blazing water, about 70 feet away from the ship".



Oil on Water.

"Difficulty was experienced by the men jumping into the water, due to the fact that oil fuel was spreading thickly around the scene. The Master recommended that when jumping into water covered by fuel oil, crew should be instructed to dive head first or if they jump feet first to protect their nose".



Troopship under enemy attack.

"He saw a soldier jump overboard from the deck below. A steel helmet was on the man's head, it's strap beneath his chin. On hitting the sea the head jerked back, snapping the neck like a brittle twig. The body turned face down and drifted sluggishly away".

Fire Extinguisher Delivery

This article reprints a suggested method for delivery of fire extinguishers to vessels. It was published some years ago in an earlier issue of this periodical and is reprinted for those who may not be familiar with it.

A droppable/floatable salvage pump container is fitted with a plywood support brace which is used to secure five 10 lb. Purple "K" fire extinguishers in place as shown in the photograph. The can with fire extinguishers may be air dropped, lowered by helicopter or floated to a vessel on fire.

U-2 RECONNAISSANCE FLIGHT USED IN SEARCH FOR LIFE RAFT

A U-2 aircraft attached to the 9th Strategic Reconnaissance Wing, Beale AFB, California was used to good advantage on an extensive over water search last fall. A photographic "sighting" was made which led to the recovery of a sailor who had been adrift on the Pacific Ocean for twenty-five days.

The rescued sailor, Bruce Collins, 23, of Glendale, California had set out with four companions to sail a 42-foot ketch, the "SPIRIT", from Honolulu to San Francisco. The SPIRIT departed Honolulu on September 12th with three men and two women on board. The SPIRIT broke up and sank during a severe storm on September 27th. The five people on board abandoned ship into two liferafts, the first with one man and one woman, and the second with Bruce Collins, another man and a woman. The rafts were tied together with a ¼ line but this parted during the first night adrift, and the rafts never regained sight of each other. On October 18th a passing merchant vessel, the M/V ORIENTAL FINANCIER, happened across the first raft containing two survivors. These survivors reported the existence of the second raft with three persons on board. A massive search using Coast Guard, Air Force, and Navy aircraft, and Coast Guard, Navy and merchant marine ships was launched to locate the second raft. (See ON SCENE 2-77)

On the afternoon of October 19th the Coast Guard SAR Mission Coordinator requested the Air Force to fly a U-2 photographic mission to assist in locating the missing raft. Although the request was promptly approved, a combination of unfavorable weather and lack of aircraft availability precluded the flight from being launched until October 22nd.

At the conclusion of the flight the film was rushed back to the 9th SRW Photointerpretation Laboratory, Beale AFB for processing. 3700 feet of color film had been exposed. The Photointerpretation Laboratory did a magnificent job of processing and interpreting the film. Additional photo interpreters were assigned and normal working hours were forgotten as the men worked straight through until the job was completed. Finally, by 2:42 a.m. the following morning, they were able to report to the Coast Guard the existence of an object on the film that could well have been the missing raft. The object was a tiny orange dot less than 1/10,000 of an inch in diameter.

Contd...on page 9

A CAUTION ABOUT RECALL PAGERS

In a recent SAR case, the Group OOD, wanting to dispatch a WPB, activated the Commanding Officer's pager in order to recall him. However, the pager did not activate immediately and the C.O. arrived too late to sail with his ship.

The investigating officer recommended that precautions be issued regarding the limitations in coverage of the paging system and that a standard procedure be promulgated for pager tests or registering of alternate recall telephone numbers by pager users who plan to be out of reach of their listed telephone recall numbers.

The district commander, in his endorsement noted that the CO's pager failed for a short time while he was apparently outside the coverage area of the VHF-FM system. Accordingly, the following was added to the District OPLAN.

> "Commands must realize that pagers are not foolproof; they may fail, and they have range limitations that may not always be predicted, especially in vehicles and buildings. It is the responsibility of the command to issue guidance and instructions on their use, and to inform users of the command policy regarding non-receipt of a page, whether caused by negligence or equipment failure".

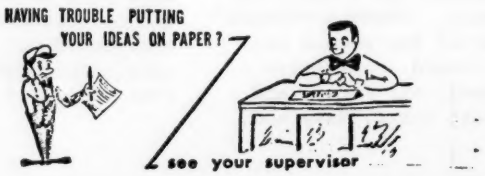
DISTRESS COMMUNICATION PROCEDURES WITH U.S. NAVAL SHIPS

The U.S. Navy has recently completed the removal of medium frequency (MF) transmitters from their vessels and installed automated teletype communication equipment. The Navy has retained the capability to copy CW (Morse Code) aboard ships; however, most Navy traffic is now handled by the automated teletype system.

Consequently, U.S. Navy ships are no longer able to reply on 500 kHZ in Morse Code when a distress call is received on that frequency; however, naval ships will continue to listen on 500 kHZ as required by international law and when a naval ship hears a distress message on 500 kHZ, it will acknowledge receipt on 2182 kHZ, using A3H emission (single side band, AM equivalent voice transmission).

The naval ship, upon receiving a distress call, will transmit on 2182 kHZ informing the ship in distress that the call has been heard and what action is planned.

In the event the naval ship is unable to render assistance, the distress message will be forwarded to appropriate Navy and Coast Guard authorities.



SAR DENSITY PLOT

Editor's Note: *The following item is reprinted from the SAR Newsletter 2/77 of the 7th Coast Guard District as it may be helpful to the other districts.*

Yankeetown Station came up with an innovative method of maintaining a visual statistical display representing SAR cases over the past several years. Although there is no requirement for such a plot, we feel it may be of interest to others. The system is very simple to establish and maintain:

a. Mount a chart representing your Station (or Group) operating area.

b. Establish a color code system for the year (i.e. 1976-red, 1977-blue, etc.)

c. Each time your unit responds to a SAR case, plot the location on the chart by using a colored circle or a chart tack.

A legit question is "what value does such a system serve"? Our response is:

a. Statistics are often invaluable. A visual display of this type is immediately evident and obvious even to the casual observer whether he be local news media, visiting officer or local citizen.

b. If well maintained, the display can become an attractive addition to the unit.

c. After a period of time, such a visual display will also begin to give you "The Big Picture" so to speak, on where all your SAR cases are concentrated. This information can be of immeasurable assistance for future planning purposes.

LEVEL FLOTATION--ITS TIME HAS COME

In Issue No. 1-76 we presented an article about a proposed Coast Guard level flotation standard for recreational boats. Such a standard has now come about.

On April 18, 1977, a Final Rule entitled "Standards for Flotation" was published in the Federal Register. Effective date of the level flotation section, August 1, 1978, coincides with the beginning of the 1979 model year. The new flotation standard (applicable to boats less than 20 feet long) divides flotation requirements for recreational boats into four parts, differentiated by the classes of boat to which they apply. The flotation standard is to be found in the Code of Federal Regulations, Chapter I, Title 33 Part 183. Subparts E, F, G, and H contain the new flotation standard.

The new flotation standard is a major improvement in the performance standards that enhance boating safety. Its effect on boat buyers, as well as boat builders, will be considerable. The boat owner and operator will now have a level, stable (and usually upright) platform where he can await rescue in case of swamping. Tests show that he will often be able to empty the boat of water and restart the motor.

Search and rescue personnel should welcome this standard as a major aid in keeping the distressed alive until we can get there.

There's No Trick to Pulling An Idea From YOUR Hat

Submit a Suggestion Today

CASE STUDY-SAILING VESSEL EASY GO

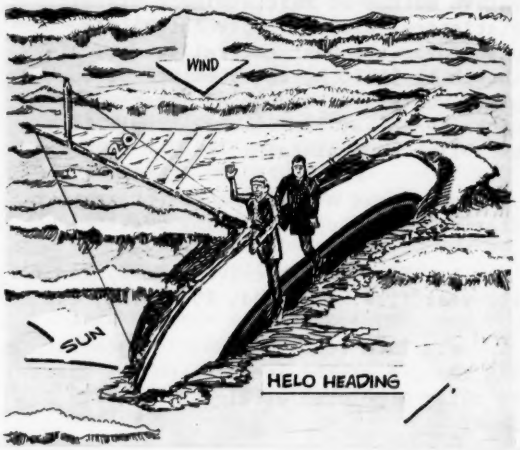
The straddling of their capsized sailboat, warm clothing, and a sharp-eyed Coast Guard pilot saved two New England sailors from death last November. The 20 foot sailboat EASY GO had been reported overdue while on a sail off Cape Ann, Massachusetts. A search by three helicopters and four surface craft during 21 November 1976 located the capsized sailboat with two survivors riding the hull. A third survivor who had also straddled the hull for 23 hours in the 50°F water had lost his grip, slipped away and disappeared about 90 minutes before the rescue.

THE SEARCH

The EASY GO was reported overdue at 2056, 20 November 1976. It had been due back from a local sailing trip at 1700. A search was commenced that night with small boats, and at first light with aircraft. The on-scene search conditions were poor: wind 270° at 40 knots, seas 8 feet, with many white caps and blowing spray. The search was further complicated in that the hull color of the vessel was blue. Of the several possible scenarios, the most probable was that the boat was capsized. At 1418, LT James M. McKERNON, in HH3F 1480 sighted the survivors. The two men were hoisted and flown to a nearby hospital. When it was learned that a third man had been with them until recently but had lost his hold on the boat, search of the vicinity was continued but without success.

THE SIGHTING

The survivors were sighted downsun, crosswind, and in a sea with numerous white caps. Aircraft altitude at the time of sighting was 500 feet. The capsized boat and survivors were first observed at the one o'clock position by LT McKERNON at an estimated distance of .75 miles. The first object to be sighted was vertically oriented and believed to be the two survivors sitting on the port gunwale of the capsized sailboat. There was no discernible color, and the observer described the object as "a wave that did not go away". The accompanying drawing shows the survivors as seen from the aircraft just prior to hoisting.



SURVIVAL FACTORS

The SAR Coordinator ascribed the escape from death by the two survivors to the following factors:

1. The sailboat floated on its side, and gave the three persons an opportunity to straddle the hull with only their lower extremities in the water;

2. The two survivors were equipped with very heavy, warm clothing over which they wore "oil skins". The result was that they were not as frequently wetted by spray; and

3. LT McKERNON made an outstanding sighting as described above.

A negative factor cited was the fact that the survivors had no signaling equipment. It was the opinion of the SAR Coordinator that, with signaling equipment, they could have attracted the attention of a rescue unit well before the third man slipped away.

POST SCRIPT COMMENT

There seems little doubt that the

survivors were saved from death from hypothermia/drowning by being able to keep most of their bodies out of the 50^0 water, a temperature which might well have killed them within 3½ hours. The incident demonstrates clearly the advantage that accrues to those who are able to stay out of the water when a marine casualty occurs.

U-2...Contd from page 5

The location of this dot was used for planning the search efforts on the 23rd and 24th of October. The raft with a single survivor, Bruce Collins, was located by a Coast Guard C-130 on the 24th. The Coast Guard Cutter CAMPBELL was vectored to the scene and recovered the raft and Mr. Collins. His two companions had died and had been buried at sea.

Although it is highly probable that the U-2 photographic sighting was indeed the raft, it cannot be stated positively that this was the case. The position at which the CGC CAMPBELL recovered Mr. Collins was 58 miles from the position of the U-2 sighting. The blown up photograph shows only a fuzzy orange "blob". Search units had also located a rusty 55 gallon drum and a dead giant squid, both orangish in color. There is a slight possibility that one of these could have been the object in the photograph. Nevertheless, the search was concentrated in the area of the sighting and it was in this area that the raft and Mr. Collins were ultimately located.

SAR Mission Coordinators should consider high altitude photographic reconnaissance as a potentially useful tool in searches involving a large water area. Certain limitations are apparent. SAR is not a primary mission of high altitude surveillance aircraft, so an aircraft is not always available. Weather is a factor inasmuch as clouds will obscure surface targets. The search object must be of a color that will contrast with the surrounding water. The target must also be large enough to be detected. A life raft, because of its small size, is probably at the lower limit of detectability.

SMCs desiring search assistance by high altitude photo reconnaissance aircraft from the Department of Defense should make the initial request to the Air Force Rescue Coordination Center, Scott AFB. Scott has the appropriate liaison with the individual reconnaissance units, and will cooperate with the SMC in obtaining the desired service.

Another possible source of this service is the National Aeronautics and Space Administration. NASA operates a small number of U-2 aircraft which could possibly be used in SAR missions when not engaged in their primary mission. The contact point for requesting this service from NASA is:

High Altitude Missions Branch
NASA Ames Research Center
Moffett Field, California 94035

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Commercial (415) 965-5376
FTS (8) 448-5376

Non-working hours:
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